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THE Feed SITUATION

BUREAU OF AGRICULTURAL ECONOMICS
UNITED STATES DEPARTMENT OF AGRICULTURE

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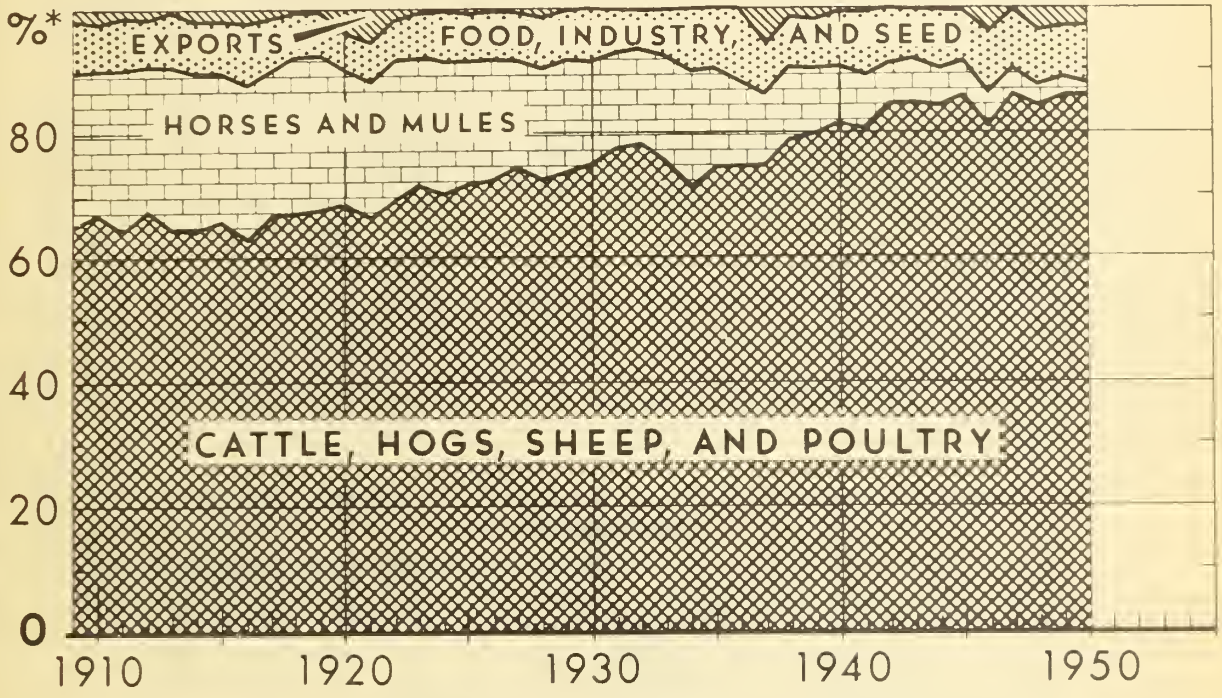
TRENDS IN CORN UTILIZATION



*PERCENT OF TOTAL °1909-25, YEAR BEGINNING NOVEMBER 1950 PRELIMINARY

U. S. DEPARTMENT OF AGRICULTURE NEG. 48208-XX BUREAU OF AGRICULTURAL ECONOMICS

The long-term downward trend in the horses and mules on farms has made available increasing quantities of corn and other feed concentrates for the production of livestock food products. Total corn disappearance has averaged a little over 3.0 billion bushels in recent years, about one-sixth more than during World War I. Currently about 85 percent of this total is going into the production of meat, dairy and poultry products compared with only two-thirds 40 years ago.

Table 1.- Statistical Summary

PRICES

Item	Unit	1949 May	1949 June	1950 May	1950 June	1951 Apr.	1951 May	1951 June
		Cents	Cents	Cents	Cents	Cents	Cents	Cents
Grains and Hay								
Corn, No. 3 Yellow, Chicago	Bushel	135.8	135.3	148.1	148.9	179.9	177.4	1/174.2
Price received by farmers, U. S.	Bushel	122.0	121.0	134.0	136.0	162.0	164.0	---
Oats, No. 2 White, Chicago	Bushel	71.0	68.9	90.8	94.4	99.1	94.6	1/ 88.2
No. 2 White, Minneapolis	Bushel	65.9	62.7	85.9	87.4	90.9	89.3	1/ 82.0
Prices received by farmers, U. S.	Bushel	66.0	60.1	78.8	80.4	90.7	88.9	---
Barley, No. 3, Minneapolis	Bushel	118.4	116.3	159.3	160.1	144.5	136.5	1/130.7
Price received by farmers, U. S.	Bushel	97.0	92.8	112.0	112.0	130.0	128.0	---
Grain sorghums, price received by farmers, U. S.	100 pounds	215.0	204.0	197.0	193.0	214.0	222.0	--
Wheat, No. 2 Hard Winter, Kansas City	Bushel	222.1	195.1	230.0	217.0	243.5	238.4	1/235.6
		Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Hay, No. 1 Alfalfa, baled, Kansas City	Ton	28.00	24.00	30.00	26.00	33.50	34.50	2/34.50
Price received by farmers, baled, U. S.	Ton	22.50	20.90	22.00	20.80	23.10	22.90	---
Byproduct Feeds (bagged)								
Standard bran, Minneapolis	Ton	52.40	44.00	54.70	46.00	61.10	55.50	2/52.85
Buffalo	Ton	57.40	50.25	61.50	52.90	67.10	61.50	2/57.35
Price paid by farmers, U. S.	100 pounds	3.42	3.13	3.48	3.18	3.46	3.61	--
Standard middlings, Minneapolis	Ton	55.40	50.60	59.60	53.75	63.10	59.10	2/61.35
Buffalo	Ton	59.40	55.60	65.70	58.90	68.25	62.90	2/62.15
Price paid by farmers,. U. S.	100 pounds	3.57	3.32	3.67	3.45	3.65	3.83	---
Cottonseed meal, 41 percent protein, Memphis	Ton	56.20	59.15	67.35	66.00	83.10	83.10	2/78.35
Linseed meal, 36 percent protein, Minneapolis 3/	Ton	59.00	54.75	72.70	68.75	64.25	59.70	2/57.15
28 percent protein, San Francisco	Ton	64.40	53.75	71.00	75.35	82.00	80.80	2/78.70
Soybean meal, 44 percent protein, Chicago ... 4/	Ton	71.00	75.40	82.60	85.15	75.45	76.55	2/75.15
Price paid by farmers, U. S.	100 pounds	4.17	4.16	4.58	4.73	4.59	4.65	---
Peanut meal, 45 percent protein, S. E. milling points	Ton	57.20	56.00	74.20	76.50	66.45	71.60	2/69.35
White hominy feed, Chicago	Ton	46.35	44.00	54.10	49.90	62.90	66.20	2/61.85
Gluten feed, 23 percent protein, Chicago	Ton	52.10	50.50	56.50	51.50	49.00	49.40	2/52.00
Tankage digester, 60 percent protein, Chicago	Ton	109.00	119.90	111.50	107.10	127.00	116.15	2/109.50
Meat scraps, 50 percent protein, Chicago	Ton	113.70	126.10	113.70	106.50	118.00	111.60	2/106.15
Fish meal, 67 percent protein, San Francisco	Ton	269.35	229.45	138.70	131.20	149.90	154.10	2/159.65
Alfalfa meal, No. 1 fine, Kansas City	Ton	38.00	33.40	39.20	38.40	45.25	46.00	---
Mixed dairy feed, 16 percent protein, price paid by farmers, U. S.	100 pounds	3.57	3.45	3.59	3.58	4.06	4.06	---
Laying mash, price paid by farmers, U. S.	100 pounds	4.53	4.47	4.58	4.56	4.90	4.97	---
Scratch feed, price paid by farmers, U. S.	100 pounds	4.00	3.94	3.99	4.00	4.49	4.52	---

INDEX NUMBERS OF PRICES

Item	Base	1949 May	1949 June	1950 May	1950 June	1951 Apr.	1951 May	1951 June
		Percent	Percent	Percent	Percent	Percent	Percent	Percent
Feed grains, price received by farmers, U. S.	1910-14=100	180	176	201	203	239	240	---
Ten principal high-protein feeds, terminal markets	1935-39=100	239	238	241	236	260	258	---
Four oilseed meals	1935-39=100	205	210	236	236	262	261	---
Tankage, meat scraps, and fish meal	1935-39=100	369	353	266	252	290	281	---
Gluten feed, brewers' dried grains, and distillers' dried grains	1935-39=100	221	212	229	208	202	206	---
Feed, price paid by farmers, U. S.	1910-14=100	208	202	214	212	236	238	---

LIVESTOCK-FEED PRICE RATIOS 5/

Item	(June average)	Unit	1949 May	1949 June	1950 May	1950 June	1951 Apr.	1951 May	1951 June
Hog-corn, Chicago 6/	1930-49= 11.9	Bushel	13.9	15.3	12.8	13.2	11.9	12.0	1/12.5
Hog-corn, U. S. farm price	1930-49= 11.5	Bushel	14.7	15.5	13.7	13.4	12.7	12.4	---
Beef-steer-corn, Chicago 7/	1930-49= 14.4	Bushel	18.3	19.6	19.6	20.2	20.0	20.1	1/ 20.5
Butterfat-feed, U. S.	1930-49= 21.8	Pound	22.6	22.3	21.1	20.9	21.1	21.4	---
Milk-feed, U. S.	1930-49= 1.14	Pound	1.12	1.15	1.08	1.07	1.22	1.18	---
Egg-feed, U. S.	1940-49= 11.2	Pound	12.4	12.9	8.2	8.3	10.8	11.2	---

Prices compiled from Chicago Journal of Commerce, Minneapolis Daily Market Record, Kansas City Grain Market Review, and reports of the Grain Branch, Production and Marketing Administration, and the Bureau of Agricultural Economics.

1/ Two weeks ended June 16. 2/ Three weeks ended June 23. 3/ 36 percent in 1951, other months shown 34 percent. 4/ 44 percent in 1951, other months shown 41 percent. 5/ Units of corn or other concentrate ration equal in value to 100 pounds of hog or beef-steer, one pound of butterfat or milk, or one dozen eggs. 6/ Based on packer and shipper purchases of barrows and gilts, and No. 3 Yellow corn. The ratios for the years 1930-37 in the average are based on all purchases of hogs and No. 3 Yellow corn. 7/ Based on price of beef-steers sold out of first hands for slaughter, and No. 3 Yellow corn.

THE FEED SITUATION

Approved by the Outlook and Situation Board, June 25, 1951

Prospects for feed crops improved during May, and by early June were near normal. The 1951 feed grain production, however, probably will fall below total 1951-52 requirements unless the remainder of the growing season is very favorable. With average weather during the remainder of the season, feed grain supplies for 1951-52 probably will be smaller than the big supplies of the past two years, but above average.

Pasture and hay conditions have been unusually good in June for the country as a whole. Excellent growing conditions in the North Central States have more than offset adverse conditions in dry areas of the South and parts of the West. The 1951 hay supply is expected to total about 123 million tons, which would provide ample forage for the prospective hay-consuming livestock to be fed.

Prices of feed grains during the next few months will be influenced by changes in prospects for this year's crops, as is ordinarily the case at this season of the year. The effect of any marked changes in prospects, however, would be tempered somewhat by Government price supports, by the large stocks of corn owned by CCC, and by price ceilings that may be imposed on feed grains.

Market prices of feed grains and many of the byproduct feeds declined from May to the middle of June. Greatest weakness was in prices of oats and barley, which have declined more than seasonally in recent weeks. Average prices received by farmers for feed grains continue above the 1950 supports, but below the parity levels. In June feed grain prices averaged about one-sixth higher than a year earlier. Prices of many of the high-protein feeds, on the other hand, were near or a little below June 1950 levels, with cottonseed meal and fish meal the principal exceptions. Linseed meal prices have been especially weak, and in early June prices at Minneapolis were $10 to $20 lower than other oilseed meals.

Price ceilings were established on fish meal and scrap in late May at the processor, distributor, and importer levels. The processors' ceiling at Pacific, Atlantic, and Gulf Coast points is $135.60 per ton for fish meal and $129.60 for fish scrap, 60 percent protein, in carload quantities, bulk, f.o.b. processing plants. These ceilings are subject to adjustment for protein content.

Longer-term trends in corn utilization, discussed in a special article in this issue, reveal a steady decline in consumption by horses and mules, leaving more corn for the production of livestock food products. Horses and mules are currently consuming less than 5 percent of the corn crop, compared with around one-fourth during World War I. Since World War I, consumption by other livestock has increased more than a third. While there has been some upward trend in domestic non-feed uses of corn, these uses have remained fairly stable as a percentage of total disappearance, accounting for 8 to 10 percent of the total during the past 40 years.

CURRENT SITUATION AND OUTLOOK

Prospects for 1951 Feed Grain Supplies

Following adverse weather for feed crops early this spring, more favorable conditions during May brought feed crop prospects to about normal by early June. Corn planting made rapid progress in late May and was nearly completed by June 1. An oat crop of 1,341 million bushels was indicated by June 1 conditions, 9 percent smaller than in 1950, but slightly above the 1940-49 average. The indicated barley crop of 255 million bushels is about 15 percent smaller than last year, when production was near average. The drop is largely the result of reduced acreage this year. Based on these early indications of production, and allowing for prospective carry-over stocks, the domestic oats supply for 1951-52 is now expected to be about 3 or 4 percent smaller than last year, and the barley supply 10 percent smaller. The sorghum grain acreage is expected to be larger than was indicated by prospective plantinss in March, but production probably will be considerably below the record 1950 crop of 237 million bushels. The 1951 corn acreage is expected to be larger than in 1950 and plantings were completed by the usual time in the important producing States.

Table 2. - Oats and barley production by regions, average 1940-49, annual 1950 and 1951

Region	Oats			Barley		
	Average 1940-49	1950	1951 1/	Average 1940-49	1950	1951 1/
	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.
North Atlantic	55,789	72,223	67,237	7,167	8,943	7,240
East North Central	401,466	460,361	434,863	18,507	15,513	13,621
West North Central	662,022	743,206	685,954	149,051	118,624	115,593
South Atlantic	46,425	56,112	52,829	6,508	7,835	7,302
South Central	90,137	70,532	44,937	12,639	5,821	3,935
Western	55,812	62,700	54,684	112,651	144,273	107,212
United States	1,311,651	1,465,134	1,340,504	306,523	301,009	254,903

1/ June 1 indications.

Table 3. - Pasture and hay condition on June 1, average 1940-49, annual 1950 and 1951 1/

Region	Pasture			All hay		
	Average 1940-49	1950	1951	Average 1940-49	1950	1951
	Percent	Percent	Percent	Percent	Percent	Percent
North Atlantic	88	87	88	87	83	85
East North Central	88	84	93	85	80	93
West North Central	85	83	91	83	81	90
South Atlantic	81	87	79	78	83	79
South Central	83	86	76	80	83	73
Western	84	74	82	86	81	85
United States	85	83	86	84	82	86

1/ Percentage of "normal" as reported by crop correspondents.

With a normal growing season, the 1951 supply of feed grains would again be well above average, but it probably will be below the big supplies of the past 2 years. The carry-over of feed grains is expected to be 10 to 15 percent below the record carry-over of 31 million tons last year. A more specific appraisal of prospective feed supplies for 1951-52 can be made after the first forecast of the corn crop is released on July 10.

Ample Supplies of Hay in Prospect; Pastures in Good Condition

Prospects for hay production in early June were generally better than average. Excellent growing conditions in the North Central States more than offset adverse conditions in dry areas of the South and parts of the West. Total 1951 production was estimated on June 1 at 107 million tons, about the same as the near-record crop of a year earlier. Including the May 1 carry-over of nearly 16 million tons, a total hay supply of 123 million tons is in prospect. This would provide ample forage for the prospective number of hay-consuming livestock to be fed. The prospective supply per animal unit is only a little smaller than the big supplies per animal of the past two or three years.

Table 4.- Hay: Acreage, yield, production, and supply per animal unit, United States, average 1942-46, annual 1947-51

Year	Acreage	Yield	Production	Carry-over May 1	Total supply	Roughage-consuming animal units fed annually 1/	Supply per animal unit
	Million acres	Tons	Million tons	Million tons	Million tons	Million	Tons
Average							
1942-46	76.1	1.37	104.6	16.0	120.6	77.0	1.57
1947	75.5	1.36	102.8	16.0	118.8	69.6	1.71
1948	73.2	1.36	99.5	15.1	114.6	68.1	1.68
1949	73.0	1.36	99.5	15.1	114.6	68.4	1.68
1950 2/	75.7	1.41	106.8	14.9	121.7	70.6	1.72
1951	3/75.7	1.41	4/107.0	15.6	4/122.6	4/73.0	4/1.68

1/ Animal units fed during the feeding season beginning October. For weights see table 65, page 49, Feed Statistics, December 1950.

2/ Preliminary.

3/ Indicated acreage for harvest.

4/ Preliminary estimate based on indications in June.

Pasture conditions for the United States were better than average on June 1, but varied sharply by regions. For the country as a whole the condition of pastures on June 1 averaged 86 percent of normal compared with 83 percent a year ago and the 1940-49 average of 85 percent. Pasture condition was generally excellent in the northern half of the country, but was poor in the South and Southeast, as a result of dry weather.

Feed Grain Prices Decline; Livestock-feed Ratios Generally Near Average

Prospects for the 1951 feed crops will be an important factor influencing feed grain prices during the next few months. The influence of any marked changes in crop prospects, however, would be tempered somewhat by Government price supports on the 1951 crops, large stocks of Government-owned corn, and the level of price ceilings that may be imposed on feed grains. In June market prices of feed grains declined from the early May level, but continued above the 1950 supports, and below the parity levels. Greatest decline since early May occurred in oats and barley prices. In recent weeks oats and barley prices have declined more than seasonally. Some weakness, however, also occurred in corn and sorghum grain prices. Prices of sorghum grains have been unusually low in relation to corn since the harvesting of the record crop last fall. In the first half of June sorghum grains prices at Kansas City averaged about 60 cents lower per hundred pounds than corn. Prices of many of the byproduct feeds declined during May and early June and then strengthened in the last half of the month. Prices of many of the protein feeds are near or below those of a year earlier. Prices of gluten feed and brewers' and distillers' dried grains have been low relative to the price of corn and most other feeds in recent months. Prices of gluten feed and distillers' grains advanced from May to June, but remained below average relative to corn and many other feeds. Prices of most of the oilseed meals declined since early in May and prices of all these feeds, except cottonseed meal, were lower in June than a year earlier. Cottonseed meal, which has been in short supply this year, has been unusually high in relation to the other oilseed meals since last fall. In recent months the price of linseed meal at Minneapolis has declined considerably, and in June prices of linseed meal were $10 to $20 per ton lower than other oilseed meals.

Table 5. Prices of specified feeds, wholesale, per 100 pounds, June 1951 with comparisons

Feed	June: Average 1938-42	June: Average 1947-50	June: 1950	June: 1951 1/	1951 as a percentage of 1938-42	1951 as a percentage of 1947-50
Grains	Dol.	Dol.	Dol.	Dol.	Pct.	Pct.
Corn, No. 3 Yellow 2/	1.19	3.24	2.66	3.11	261	96
Oats, No. 2 White 2/	1.18	2.99	2.95	2.76	234	92
Barley, No. 3 3/	1.12	3.59	3.34	2.72	243	76
Milo, No. 2 Yellow 4/	1.11	2.88	2.22	2.50	225	87
By product feeds 5/						
Cottonseed meal, 41 pct. 6/	1.30	3.54	3.30	3.92	302	111
Soybean meal, 44 pct. 2/	1.43	4.14	4.26	3.63	254	88
Linseed meal, 36pct. 3/	1.68	3.34	3.44	2.85	170	85
Bran, Std., Sp. Wht. 2/	1.18	2.83	2.47	2.61	221	92
Middlings, Std., Sp. Wht. 2/	1.34	3.28	2.82	3.11	232	95
Gluten feed, 23pct., 2/	1.06	2.94	2.58	2.60	245	88
Brewers' dried grains 7/	.98	2.46	2.19	2.20	224	89
Distillers' dried grains 8/	1.32	3.42	2.88	3.10	235	91
Tankage, 60 pct. 2/	2.61	5.32	5.36	5.48	210	103
Meat scraps, 2/	2.55	5.27	5.32	5.29	207	100
Fish meal, 67 pct. 9/	2.97	8.35	6.56	7.87	265	94

1/ 2 weeks ended June 16. 2/ Chicago. 3/ Minneapolis. 4/ Kansas City. 5/ Bagged, carlots. 6/ Memphis. 7/ Milwaukee. 8/ Cincinnati. 9/ San Francisco.

Livestock-feed price ratios have in general been a little more favorable to livestock and poultry producers this spring than a year ago, reflecting a little greater increase in prices of livestock and livestock products than in feed prices. The marked increase in egg prices brought the egg-feed price ratio above the 10-year average this spring. In the first half of 1950 it was well below average. The hog-corn price ratio in recent months has been a little lower than a year earlier, but has remained close to the 1930-49 average. The milk-feed price ratio in May was higher than a year ago and above average for that month. The butterfat-feed ratio has been a little below average in recent months, but slightly higher than a year ago.

Price Ceilings Established on Fish Meal and Scrap

Price Ceiling Regulation No. 39, issued May 24, 1951, establishes ceiling pricesat the processor, importer, and distributor levels for fish scrap, fish meal, fish solubles, and specialty fish feed products. The processor ceilings price at Pacific, Atlantic, and Gulf Coast points is $135.60 per ton for fish meal and $129.60 for fish scrap, 60 percent protein, in carload quantities, bulk, f.o.b. processing plant. For each 1 percent protein below 60 percent the ceiling is reduced by $2.26 per ton. At Pacific Coast points the ceiling is increased $2.26 per ton for each 1 percent protein above 60 percent. The regulation does not apply to export sales or to sales by retailers other than processors, importers, and distributors. The General Ceiling Price Regulation is applicable to the retail sales.

The ceiling price for fish solubles containing 50 percent or more solids by weight is 5 cents per pound. The ceiling is reduced 2 percent for each 1 percent the solids content is below 50 percent. Price ceilings for specialty fish feed products are based on the price ceilings for fish meal in the area where the processor of such products is located. Allowance is made by the processor for the difference between the price of the specialty product and fish meal, based on prices in three consecutive months during the period July 1, 1949 - June 24, 1950.

Price ceilings for sales by importers on Atlantic and Pacific Coasts are the same as those for processors.

The distributors' ceiling price is based on the processors' ceiling, with adjustment for the average differential between the suppliers' price and the distributors' price during any three consecutive months of the period July 1, 1949-June 24, 1950.

Farm Sales of Feed Grains from the 1950 Crops

Farm sales of corn from the 1950 crop are estimated at 774 million bushels for the year, 190 million bushels less than from the 1949 crop and about 300 million bushels below the record sales in 1948-49. These sales figures include an allowance for unredeemed loans and for corn delivered to the Government under purchase agreements. While total sales of 1950 corn are much smaller than in the 2 preceding years, much less corn is going under price support and a larger percentage is going into regular market channels. Receipts of corn at 12 primary markets during October-June this year were about 13 percent larger than in the same period of 1949-50. Terminal market stocks of corn reached a record high of 75 million bushels last March, then declined to about 50 million bushels by the end of June.

Sales of oats, barley, and sorghum from the big 1950 crops were all larger than in the preceding year and above the 10-year average. While farm sales of oats from the 1950 crop were larger than a year earlier, receipts of oats at primary markets were the smallest in recent years. This apparently reflects increased purchases of oats for local feeding. Large market receipts of oats and barley relative to sales during some of the war years were partly the result of large imports of these grains during that period, which increased commercial movement.

Table 6. - Farm sales of feed grains and hay, and primary market receipts of corn, oats, and barley, United States, marketing seasons 1941-50

Marketing season beginning	Corn		Oats		Barley		Sorghum grain, farm sales 1/	Hay, farm sales
	Farm sales: 1/	Primary market receipts: 2/	Farm sales 1/	Primary market receipts: 2/	Farm sales: 1/	Primary market receipts: 3/		
	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. tons
1941	541.4	307.5	222.2	91.9	134.9	104.8	37.9	10.9
1942	579.4	317.7	241.3	117.5	165.5	127.8	33.6	12.6
1943	552.0	253.1	222.5	134.7	142.4	147.7	58.5	12.6
1944	702.4	392.3	251.1	134.1	137.6	146.4	106.7	12.5
1945	606.0	271.7	391.0	219.1	152.2	119.4	54.2	13.4
1946	828.2	447.2	381.6	197.0	151.4	129.3	66.8	13.1
1947	511.7	231.7	334.2	154.3	167.9	138.5	65.5	13.4
1948	1,076.1	345.3	376.2	142.2	188.2	138.9	79.6	12.9
1949	963.7	355.1	325.1	129.4	140.9	129.0	102.3	12.7
1950 4/	773.9		356.5	5/105.0	189.0	5/129.0	159.0	13.6

1/ Includes an allowance for considerable quantities of unredeemed loans and purchase agreement deliveries for 1948 and 1949. Small quantities of unredeemed loans are included in some earlier years.
2/ Chicago, Milwaukee, Minneapolis, Duluth, St. Louis, Kansas City, Peoria, Omaha, Indianapolis, Sioux City, St. Joseph, and Wichita. Year beginning October for corn and July for oats.
3/ Minneapolis, Milwaukee, Chicago, and Duluth. Year beginning July.
4/ Preliminary.
5/ Partly estimated.

Farm sales of sorghum grains from the 1950 crop were the largest on record. Commercial movement of sorghum grains has been unusually heavy during 1950-51. Large quantities of sorghum grains have gone to deficit feed areas, and have been used for alcohol production and for export. Farm sales of hay from the 1950 crop totaled 13.6 million tons, the largest in recent years.

Much Smaller Quantity of Feed Grains Placed Under Price Support in 1950-51

Stronger demand for feed grains and smaller corn production have resulted in much less feed grain going under price support from the 1950 crop than in 1948 and 1949. Through April farmers had placed only 49 million bushels of corn under price support. This compares with a total of 548 million bushels of 1948 corn and 386 million bushels of 1949 corn. The bulk of the 1948 corn was either delivered to CCC or resealed when the loan became due in 1949. With higher corn prices in 1950, however, over half of the 1949 corn was redeemed by farmers. Through April, 1951, about 82 million bushels of 1949 corn had been delivered to CCC and 64 million bushels resealed.

Less than one-half as much oats was placed under price support from the 1950 crop as a year earlier, slightly less barley, and about a fourth less sorghum grains. A total of 4.0 million tons of the 4 feed grains was placed under loan or purchase agreement in 1950-51, compared with 14.6 million tons in 1949-50 and 18.0 million tons in 1948-49. Practically all of the sorghum grain placed under price support in 1949 was delivered to CCC. On the other hand, farmers delivered only a small part of the 1949 oats placed under loan and less than one-half of the barley.

Table 7. Feed grains: Quantities placed under price support, United States, 1948-50

Grain	1948 1/	1949 1/	1950 Loan	1950 Purchase agreement	1950 Total
	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.
Corn	547,768	386,354	2/ 48,605	2/ 742	2/ 49,347
Oats	23,416	41,901	14,625	363	14,988
Barley	49,154	32,921	29,578	991	30,569
Sorghum grain	41,375	81,643	59,164	871	60,035
Total(1,000 tons)	18,050	14,564	3,961	75	4,036

Compiled from reports of Production and Marketing Administration.

1/ Placed under loan or purchase agreement.

2/ Through April 1951. Loans are available through May 1951.

TRENDS IN CORN UTILIZATION

Major changes in agriculture and in food consumption in this country over the past 40 years have been accompanied by a changing pattern of corn utilization. Most important among the changes in Agriculture has been the gradual shift from the use of horses and mules to tractors for farm power. Since World War I this has released about 20 percent of our corn production for use in producing meat, milk, eggs, and other food products.

The total quantity of corn consumed by all livestock has remained fairly stable as a percentage of total corn disappearance. In most of the past 40 years livestock feeding has accounted for from 88 to 92 percent of the total disappearance. Of the non-feed uses, exports have been the most variable, ranging from less than 1 percent of the total in many years to as much as 4 or 5 percent of the total in a few years. Over the 4 decades there has been a steady downward trend in the use of corn for dry-process products, principally corn meal, but this has been largely offset by increased use of corn for starch, sugar, and sirup.

The total utilization of corn for domestic uses and exports followed a slightly downward trend from World War I to the beginning of World War II. This was partly the result of lower demand during the 1930's. But it also reflects the short corn crops in that period, which forced liquidation of livestock and influenced corn requirements into the late 1930's. During World War II corn utilization increased sharply and has averaged a little over 3.0 billion bushels annually during the past 10 years. This was a sixth greater than during World War I and a third greater than the low level of the 1930's. Larger corn utilization in the past 10 years reflects the strong demand during this period and increased corn production resultingfrom higher yields per acre. 1/

Livestock Feed

The total quantity of corn consumed by livestock has averaged a little over 2.7 billion bushels annually in the past 10 years, about one-seventh more than during 1910-19. The increase in the quantity of corn going into the production of livestock food products has been much greater than this, however, since much less corn is now required to maintain the work stock on farms because of the steady decline in horse and mule numbers. It is estimated that of the average annual consumption of about 2.4 billion bushels by livestock in 1910-19, over 600 million bushels was fed to horses and mules. In recent years horses and mules have consumed only around 100 million bushels of corn annually.2/ The total tonnage of all feed grains and other concentrates fed to horses and mules in 1910-19 was around 25 million tons, while currently it is less than 5 million tons. This has made possible the diversion of the equivalent of over 700 million bushels of corn from farm power production to the production of livestock food products over the 30-year period.

1/ More detailed information on corn yields and production trends was published in the Feed Situation, March 1951, pages 16 to 19.
2/ Based on estimated quantities of corn and other feed concentrates fed to livestock published in Circular 836, Consumption of Feed by Livestock, 1909-47, by R. D. Jennings, pages 71 and 88.

Table 8.- Corn: Supply and disappearance, United States, 1909-50

Marketing year beginning	Carry-over 1/	Production	Imports 2/	Total supply	Total disappearance	Carry-over 1/ at close of year
	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.
November						
1909	85	2,611	*	2,696	2,572	124
1910	124	2,853	*	2,977	2,850	127
1911	127	2,475	1	2,603	2,536	67
1912	67	2,948	1	3,016	2,876	140
1913	140	2,273	18	2,431	2,352	79
1914	79	2,524	8	2,611	2,513	98
1915	98	2,829	2	2,929	2,843	86
1916	86	2,425	1	2,512	2,478	34
1917	34	2,908	3	2,945	2,829	116
1918	116	2,441	9	2,566	2,494	72
1919	72	2,678	9	2,759	2,630	129
1920	129	3,071	1	3,201	2,929	272
1921	272	2,928	*	3,200	3,037	163
1922	163	2,707	*	2,870	2,805	65
1923	65	2,875	4	2,944	2,853	91
1924	91	2,223	2	2,316	2,265	51
1925	51	2,798	1	2,850	2,671	179
October						
1926	280	2,547	3	2,830	2,613	217
1927	217	2,616	3	2,836	2,742	94
1928	94	2,666	*	2,760	2,613	147
1929	147	2,516	1	2,664	2,524	140
1930	140	2,080	1	2,221	2,053	168
1931	168	2,576	*	2,744	2,474	270
1932	270	2,930	*	3,200	2,814	386
1933	386	2,398	1	2,785	2,447	338
1934	338	1,449	37	1,824	1,759	65
1935	65	2,299	21	2,385	2,209	176
1936	176	1,506	104	1,786	1,720	66
1937	66	2,643	1	2,710	2,349	361
1938	361	2,549	1	2,911	2,327	584
1939	584	2,581	1	3,166	2,478	688
1940	688	2,457	1	3,146	2,501	645
1941	645	2,652	*	3,297	2,806	491
1942	491	3,069	*	3,560	3,197	3/363
1943	384	2,966	4	3,354	3,123	231
1944	231	3,088	6	3,325	3,010	315
1945	315	2,881	1	3,197	3,024	173
1946	173	3,250	1	3,424	3,138	286
1947	286	2,384	*	2,670	2,545	125
1948	125	3,682	1	3,808	2,983	825
1949	825	3,379	1	4,205	3,345	860
1950	860	3,131	1	3,992 4/	3,317	4/675

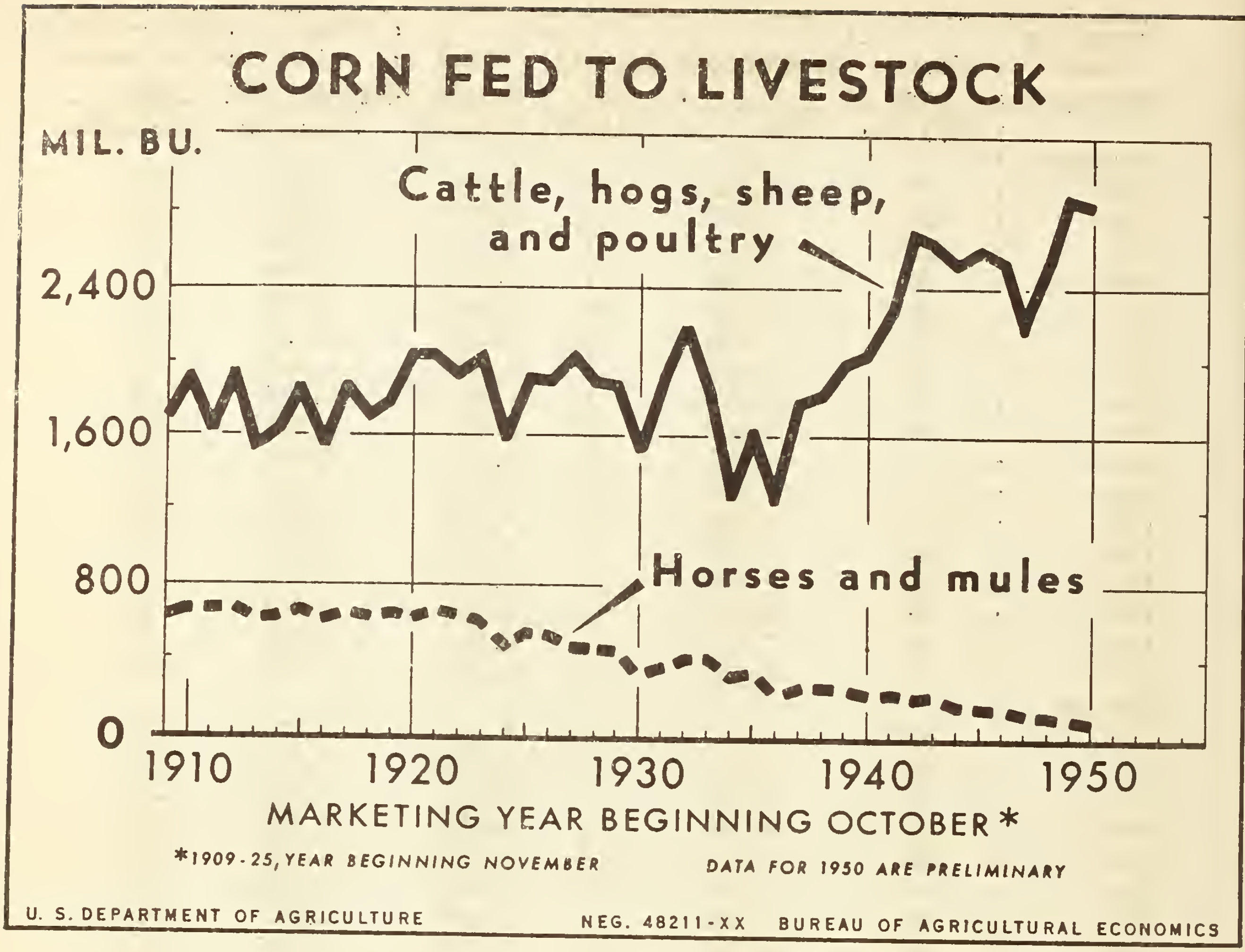
1/ Stocks of corn on November 1, 1909-25 and on October 1, 1926-50. Stocks in all positions, including interior mill, elevator, and warehouse stocks, 1943 to date.

2/ Includes grain equivalent of cornmeal.

3/ Stocks of corn in interior mills, elevators, and warehouses excluded in computing 1942-43 disappearances.

4/ Preliminary estimates.

* Less than 500,000 bushels.



The downtrend in the number of horses and mules has been accompanied by increasing numbers of cattle, hogs, and poultry. Milk and egg production has nearly doubled since 1910, and hog production has increased over 50 percent. The total quantity of corn consumed annually by livestock other than horses and mules has increased about 800 million bushels, or nearly 50 percent, since 1910-19.

Much of the increase in the production of milk, eggs, and meat in the past 3 decades has been made possible by shifting from horses and mules to mechanical power. Since this shift is nearing completion, any further substantial increase in livestock food products for our expanding population will have to come from a larger production of corn and other feed crops. Since the total acreage that can be put into feed crops is limited, the increase in production will have to come primarily from greater yield per acre. Additional feed for expanding the production of livestock food products in the future will depend more on improved practices, including the increased use of commercial fertilizer.

Domestic Non-Feed Uses

The use of corn for food, industrial purposes, and seed generally amounts to about 8 to 10 percentof the total disappearance of corn. Over the past 40 years there has been a downward trend in the quantity of corn going into corn meal and grits for human food. Of the total quantity of corn going into dry-processed products in recent years, about one-fourth has been used for producing brewers' grits. Dry-processing of corn for food is currently only about one-half as large as it was at the beginning of the century, reflecting a marked drop in the per capita consumption of corn meal and other dry-process products.

Table 9.- Corn: Disappearance, United States, 1909-50

Marketing year beginning	Livestock feed 1/			Food, industrial uses, and seed						
	Horses and mules	Other livestock 2/	Total	Dry-process products 3/	Wet-process products 4/	Alcohol and distilled spirits 5/	Seed	Total	Exports 6/	Total disappearance
(November)	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.
1909	635	1,675	2,310	132	48	20	18	218	44	2,572
1910	660	1,909	2,569	132	46	23	18	219	62	2,850
1911	660	1,625	2,285	129	48	23	18	218	33	2,536
1912	665	1,943	2,608	128	50	24	18	220	48	2,876
1913	610	1,519	2,129	128	46	21	18	213	10	2,352
1914	635	1,614	2,249	125	56	14	18	213	51	2,513
1915	675	1,873	2,548	129	63	32	18	242	53	2,843
1916	620	1,559	2,179	133	59	34	20	246	53	2,478
1917	655	1,892	2,547	137	72	14	18	241	41	2,829
1918	620	1,678	2,298	96	67	4	18	185	11	2,494
1919	655	1,778	2,433	96	67	1	18	182	15	2,630
1920	625	2,016	2,641	95	51	5	18	169	119	2,929
1921	665	2,016	2,681	101	68	3	18	190	166	3,037
1922	625	1,939	2,564	102	66	3	18	189	52	2,805
1923	600	2,039	2,639	95	76	5	18	194	20	2,853
1924	485	1,589	2,074	88	68	7	18	181	10	2,265
1925	535	1,914	2,449	89	83	8	18	198	24	2,671
(October)										
1926	505	1,893	2,398	91	82	8	18	199	16	2,613
1927	480	2,035	2,515	96	88	6	18	208	19	2,742
1928	460	1,899	2,359	99	87	10	17	213	41	2,613
1929	455	1,860	2,315	93	80	10	18	201	8	2,524
1930	345	1,529	1,874	88	67	2	20	177	2	2,053
1931	385	1,911	2,296	87	62	5	20	174	4	2,474
1932	430	2,195	2,625	84	72	6	19	181	8	2,814
1933	415	1,839	2,254	88	71	12	18	189	4	2,447
1934	320	1,255	1,575	87	55	23	18	183	1	1,759
1935	350	1,641	1,991	89	76	35	18	218	*	2,209
1936	235	1,284	1,519	85	67	32	17	201	*	1,720
1937	265	1,755	2,020	84	72	18	16	190	139	2,349
1938	265	1,834	2,099	85	76	18	15	194	34	2,327
1939	250	1,981	2,231	87	83	19	14	203	44	2,478
1940	220	2,038	2,258	90	101	25	12	228	15	2,501
1941	240	2,260	2,500	93	127	54	12	286	20	2,806
1942	210	2,699	2,909	100	128	42	13	283	5	3,197
1943	225	2,641	2,866	102	121	11	13	247	10	3,123
1944	190	2,528	2,718	101	125	37	12	275	17	3,010
1945	170	2,592	2,762	91	112	27	12	242	20	3,024
1946	165	2,536	2,701	100	143	55	12	310	127	3,138
1947	115	2,180	2,295	91	110	30	12	243	7	2,545
1948	110	2,507	2,617	95	117	31	12	255	111	2,983
1949	100	2,868	2,968	95	128	36	11	270	107	3,345
1950 7/	80	2,837	2,917	98	140	50	12	300	100	3,317

1/ Based on estimates of corn consumed by various classes of livestock published in Circular No. 836, Consumption of Feed by Livestock, 1909-47, December 1949.

2/ Principally dairy and beef cattle, hogs, sheep, and poultry, but includes small quantities fed to other livestock.

3/ Cornmeal, flour, hominy and grits, and prepared breakfast cereals. Based on reports of the Bureau of the Census and the Bureau of Internal Revenue.

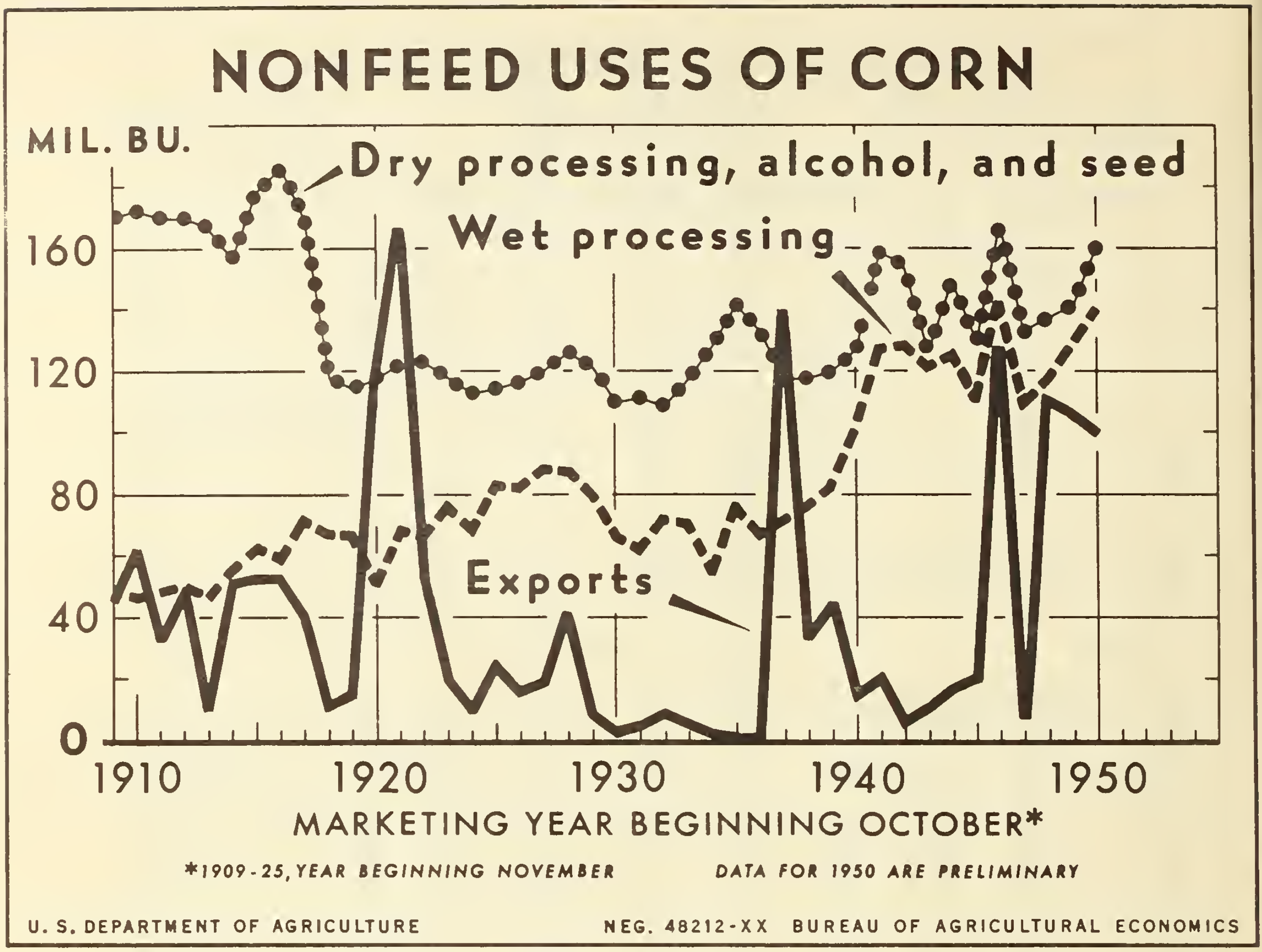
4/ Starch, sugar, sirup, etc. Compiled from reports of Corn Refiners' Statistical Bureau and Price Waterhouse, and Company, New York. Calendar years following 1909-16.

5/ Compiled from reports of the Bureau of Internal Revenue. Year beginning July, 1909-25.

6/ Grain only.

7/ Preliminary estimates based on indications in June.

* Less than 500,000 bushels.



The use of corn for producing starch, sugar, sirup, and other wet-process products, on the other hand, has more than doubled since 1909. In recent years it has been a major non-feed use of corn, requiring over 100 million bushels of corn annually. The quantity of corn used in the production of alcohol and distilled spirits has ranged from around 30 to 50 million bushels in recent years, somewhat larger than in the pre-prohibition period 1909-18. In the three marketing years beginning 1947-49 the quantity of corn used for industrial alcohol was comparatively small. Most of the corn distilling was for beverage alcohol. During the 1950-51 season, however, production of industrial alcohol has increased considerably, and may make up more than one-fourth of the total 50 million bushels expected to be processed by the industry this year.

Exports

Exports of corn have varied greatly over the past 40 years. In most of this period, exports have made up a very minor proportion of total corn disappearance. In one-half of the years they accounted for less than 1 percent of the total disappearance. While exports of corn totaled well over 100 million bushels in each of the years from 1895 to 1900, they have exceeded 100 million bushels in only 7 years since 1900. One of these years occurred before World War I, 2 after World War I, and 3 after World War II. Exports also were heavy in 1937-38, when the Argentine crop was short, European demand was good, and the crop in this country comparatively large.

Table 10 - . Corn : Disappearance by major uses as a percentage of total, United States, 1909-50 1/

Marketing year beginning	Livestock feed			Food, industrial uses, and seed	Exports	Total
	Horses and mules	Other livestock	Total			
	Percent	Percent	Percent	Percent	Percent	Percent
November						
1909	24.7	65.1	89.8	8.5	1.7	100.0
1910	23.1	67.0	90.1	7.7	2.2	100.0
1911	26.0	64.1	90.1	8.6	1.3	100.0
1912	23.1	67.6	90.7	7.6	1.7	100.0
1913	25.9	64.6	90.5	9.1	.4	100.0
1914	25.3	64.2	89.5	8.5	2.0	100.0
1915	23.7	65.9	89.6	8.5	1.9	100.0
1916	25.0	62.9	87.9	9.9	2.2	100.0
1917	23.1	66.9	90.0	8.5	1.5	100.0
1918	24.9	67.3	92.2	7.4	.4	100.0
1919	24.9	67.6	92.5	6.9	.6	100.0
1920	21.3	68.8	90.1	5.8	4.1	100.0
1921	21.9	66.4	88.3	6.2	5.5	100.0
1922	22.3	69.1	91.4	6.7	1.9	100.0
1923	21.0	71.5	92.5	6.8	.7	100.0
1924	21.4	70.2	91.6	8.0	.4	100.0
1925	20.0	71.7	91.7	7.4	.9	100.0
October						
1926	19.4	72.4	91.8	7.6	.6	100.0
1927	17.5	74.2	91.7	7.6	.7	100.0
1928	17.6	72.7	90.3	8.1	1.6	100.0
1929	18.0	73.7	91.7	8.0	.3	100.0
1930	16.8	74.5	91.3	8.6	.1	100.0
1931	15.6	77.2	92.8	7.0	.2	100.0
1932	15.3	78.0	93.3	6.4	.3	100.0
1933	16.9	75.2	92.1	7.7	.2	100.0
1934	18.2	71.3	89.5	10.4	.1	100.0
1935	15.8	74.3	90.1	9.9	---	100.0
1936	13.7	74.6	88.3	11.7	---	100.0
1937	11.3	74.7	86.0	8.1	5.9	100.0
1938	11.4	78.8	90.2	8.3	1.5	100.0
1939	10.1	79.9	90.0	8.2	1.8	100.0
1940	8.8	81.5	90.3	9.1	.6	100.0
1941	8.6	80.5	89.1	10.2	.7	100.0
1942	6.6	84.4	91.0	8.9	.1	100.0
1943	7.2	84.6	91.8	7.9	.3	100.0
1944	6.3	84.0	90.3	9.1	.6	100.0
1945	5.6	85.7	91.3	8.0	.7	100.0
1946	5.3	80.8	86.1	9.9	4.0	100.0
1947	4.5	85.7	90.2	9.5	.3	100.0
1948	3.7	84.0	87.7	8.6	3.7	100.0
1949	3.0	85.7	88.7	8.1	3.2	100.0
1950 2/	2.5	85.5	88.0	9.0	3.0	100.0

1/ Computed from data in table 9.

2/ Preliminary.

Table 11.- Production and stocks of specified byproduct feeds, April 1951 with comparisons

Item	1949-50	1950-51	1950	1951		
	Oct.-Apr.	Oct.-Apr.	April	February	March	April
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Production						
Cottonseed cake and meal	1,905.4	1,246.2	162.1	145.0	106.3	74.7
Soybean cake and meal	2,818.3	3,776.3	403.5	528.8	580.3	512.0
Linseed cake and meal	383.2	434.5	44.1	56.5	67.2	60.6
Peanut cake and meal	102.5	92.1	6.9	15.1	17.8	15.6
Copra cake and meal	82.9	95.9	9.7	10.2	12.9	11.5
Total	5,292.3	5,645.0	626.3	755.6	784.5	674.4
Corn gluten feed and meal	513.4	598.4	75.2	81.1	94.3	79.0
Brewers' dried grains	118.5	123.1	19.2	16.4	20.4	20.0
Distillers' dried grains	163.6	424.0	24.9	56.4	67.0	46.4
Wheat millfeeds	2,671.4	2,679.0	337.5	372.3	385.0	338.0
Rice millfeeds	132.4	121.6	10.0	14.9	13.1	8.4
Alfalfa meal	359.9	332.2	50.8	33.0	38.1	34.6
Fish cake and meal	80.2	82.4	3.5	3.3	3.4	5.7
Dry or powdered skim milk	6.2	2.9	1.6	.4	.5	.5
Stocks end of period						
Cottonseed cake and meal	182.2	105.9	182.2	165.3	130.7	105.9
Soybean cake and meal	86.7	172.2	86.7	104.2	141.1	172.2
Linseed cake and meal	10.4	21.2	10.4	21.3	21.9	21.2
Peanut cake and meal	2.7	6.3	2.7	7.3	7.9	6.3
Copra cake and meal	5.0	10.0	5.0	7.1	9.9	10.0
Total	287.0	315.6	287.0	305.2	311.5	315.6
Brewers' dried grains	2.3	3.3	2.3	4.0	4.3	3.3
Distillers' dried grains	3.1	46.7	3.1	57.7	60.3	46.7
Alfalfa meal	47.8	23.0	47.8	97.5	56.6	23.0

Compiled as follows: Wheat millfeeds, cottonseed, soybean, linseed, and copra cakes and meals, Bureau of the Census; gluten feed and meal, brewers' and distillers' dried grains, rice millfeeds, and alfalfa meal, Production and Marketing Administration; fish cake and meal from Fish and Wildlife Service, Department of the Interior.

Table 12. - Feed grains: Receipts at primary markets, May, average 1945-49 and 1950, February-May 1951

Item	May		1951			
	Average 1945-49	1950	Feb.	Mar.	Apr.	May
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Corn, 12 markets 1/	30,618	24,052	33,207	33,022	25,664	21,916
Oats, 12 markets 1/	8,565	8,343	4,267	5,595	8,263	10,114
Barley, 4 markets 2/	8,273	7,696	6,663	9,801	9,703	6,822

1/ Chicago, Milwaukee, Minneapolis, Duluth, St. Louis, Kansas City, Peoria, Omaha, Indianapolis, Sioux City, St. Joseph, and Wichita.

2/ Minneapolis, Milwaukee, Chicago, and Duluth.

3/ Preliminary.

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